A research study on awareness regarding crypto currency among investors

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ABSTRACT

A financial system is a system that allows the exchange of fund between lenders, investors, and borrowers. Financial systems operate at national and global levels. They consist if complex, closely related services, markets, and institutions intended to provide an efficient and regular linkage between investors and depositors. Money, credit and finance are used as medium if exchange in financial systems. The payment system has gained significance once the countries which are into digitization proved to be more effective in financial inclusion measures. India is stepping in to the leadership role in case of internet stage, as it is dominating many other countries like US in case of internet usage and anticipating a growth in such a way people have more access to mobile than that of electricity connections at home. Indian policies are changing to adapt to the new digital world. India is open to innovation and is expecting a large investment in Indian E-commerce industry. Even though internet comes with many disadvantages India is trying to use its maximum benefits in order to create transparency in the system and that is one of the reason why Government shifted towards E-governance. The aim of this paper is to find out the related literature form the past literature by using the secondary data analysis.

Keywords: Crypto Currency, Investors Decision, Digital Payment.

1. INTRODUCTION

FINANCIAL SYSTEM

"Digital" is an intricate word in the global as well as Indian milieu. Oxford English dictionary states the meaning of "digital" as "Relating to, using, or storing data or information in the form of digital signals; Involving or relating to the use of computer technology". In this 21stcentury a country is well-thought-out as "developed" only if it capitalizes digitization. Digitalization is using digital technology as a part of everyday life. Digitalization is different from digitization which means "the action or process of digitizing; the conversion of analogue data into digital form." Digitalization includes digitization and digitization is the first and foremost step to digitalization. Digitization of payments helps a person to transfer money from his bank account to the payees for his day to day transactions. Digital payments are a number of instruments under one umbrella which can be used as and when required. The word "digital cash "has been introduced long back but it didn't gain much attention as E-Commerce has received.

THE COMPONENTS OF A FINANCIAL SYSTEM

Financial institutions:

A financial institution (FI) is a company engaged in the business of dealing with financial and monetary transactions such as deposits, loans, investments, and currency exchange. Financial institutions encompass a broad range of business operations within the financial services sector including banks, trust companies, insurance companies, brokerage firms, and investment dealers. Virtually everyone living in a developed economy has an ongoing or at least periodic need for the services of financial institutions.

Banks:

A banks are accepts deposits from the public and creates credit. Banks are <u>financial intermediaries</u> that lend money to borrowers to generate revenue and accept deposits. They are typically regulated heavily, as they provide market stability and consumer protection. Banks include:

- Public banks
- Commercial Banks
- Central Banks
- Co-operative Banks
- State-managed Co-operative Banks
- State-managed Land Development Banks

Non-bank financial institutions:

A non-banking financial institution (NBFI) or non-bank financial company (NBFC) is a financial institution that does not have a full banking license or is not supervised by a national or international banking regulatory agency. NBFI facilitate bank-related financial service, such as investment, risk pooling, contractual savings, and market brokering. Examples of these include insurance firms, pawn shops, cashier's check issuers, check cashing locations, payday lending, currency exchange, and microloan organisation. Alan Greenspan has identified the role of NBFIs in strengthening an economy, as they provide "multiple alternatives to transform an economy's savings into capital investment which act as backup facilities should the primary form of intermediation fail."

Financial market:

<u>Financial markets</u> are markets in which <u>securities</u>, <u>commodities</u>, and <u>fungible</u> items are traded at prices representing <u>supply and demand</u>. The term "market" typically means the institution of aggregate exchanges of possible buyers and sellers of such items.

Primary markets

The <u>primary market</u> (or initial market) generally refers to new issues of <u>stocks</u>, <u>bonds</u>, or other financial instruments. The primary market is divided in two segment, the money market and the capital market. Hence it's also called new issue market. The primary market deals with those securities which are issued to the public for the first time.

Secondary markets

The <u>secondary market</u> refers to transactions in financial instruments that were previously issued. A market for secondary sale of securities. In other words, securities which have already passed through the new issue market are traded in this market. Generally, such securities are quoted in the stock exchange and it provides a continuous and regular market for buying and selling of securities.

CRYPTO CURRENCY

A **cryptocurrency** (or **crypto currency**) is a digital asset designed to work as a medium of exchange that uses strong cryptography to secure financial transactions, control the creation of additional units, and verify the transfer of assets. Crypto currencies use decentralized control as opposed to centralized digital currency and central banking systems. The decentralized control of each crypto currency works through distributed ledger technology, typically a block chain, that serves as a public financial transaction database.

Bitcoin, first released as open-source software in 2009, is generally considered the first decentralized crypto currency. Since the release of bitcoin, over 6,000 *altcoins* (alternative variants of bitcoin, or other cryptocurrencies) have been created.

FORMAL DEFINITION

According to Jan Lansky, a cryptocurrency is a system that meets six conditions.

- 1. The system does not require a central authority, Its state is maintained through distributed consensus.
- 2. The system keeps an overview of cryptocurrency units and their ownership.
- 3. The system defines whether new cryptocurrency units can be created. If new cryptocurrency units can be created, the system defines the circumstances of their origin and how to determine the ownership of these new units.

4. Ownership of cryptocurrency units can be proved exclusively cryptography.

5. The system allows transactions to be performed in which ownership of the cryptographic units is changed. A transaction statement can only be issued by an entity proving the current ownership of these units.

6.If two different instructions for changing the ownership of the same cryptographic units are simultaneously entered, the system performs at most one of them.

In March 2018, the word cryptocurrency was added to the Merriam-Webster Dictionary

Altcoin

The term altooin has various similar definitions. Stephanie Yang of the wall street journal defined altooins as "alternative digital currencies," while Paul Vigna, also of *The Wall Street Journal*, described altooins as alternative versions of bitcoin. Aaron Hankins of *Market watch* refers to any cryptocurrencies other than bitcoin as alteroins.

Crypto token

A blockchain account can provide functions other than making payments, for example in Decentralized applications or Smart contracts. In this case, the units or coins are sometimes referred to as crypto tokens (or crypto tokens).

THE HISTORY OF CRYPTOCURRENCY

The first decentralized digital cryptocurrency can be traced back to "bit gold" (not to be confused with bit gold), which was worked on by Nick Szabo between 1998 and 2005 but was never implemented.

Although bit gold is considered the first precursor to bitcoin, cryptocurrency pioneer David Chaum's company digicash (a company founded in 1989 which attempted to innovate digital currency), Wei Dai's b-money(a conceptual system published in 1998 which Satoshi cites it in the Bitcoin white paper), and "e-gold" (a centralized digital currency that started in 1996) are all notable early mentions.

With that history noted, modern digital currency starts in 2008 when satoshinakamoto (an anonymous person and/or group) released their paper detailing what would become bitcoin.

Bitcoin became the first decentralized digital coin when it was created in 2008. It then went public in 2009.

As of 2019, Bitcoin is the most commonly known and used cryptocurrency. Meanwhile, other coins including Ethereum (ETH), Ripple (XRP), Litecoin (LTC), and more are notable mentions.

Given the popularity of Bitcoin as well as its history, the term "altcoin" is sometimes used to describe alternative cryptocurrencies to bitcoin (especially coins with small market caps).

As of January 2015, there were over 500 different types of cryptocurrencies – or altcoins – for trade in online markets. However, only 10 of them had market capitalizations over \$10 million.

As of September 2017, there were over 1,100 cryptocurrencies and the total market capitalization of all cryptocurrencies reached an all-time high surpassing \$60 billion! Then, by December 2017, the total market cap reached \$600 billion (a multiple of 10 in only two months).

In other words, although the future is uncertain, cryptocurrency seems to be more than just a fad. Today cryptocurrency is shaping up to be a growing market that (despite the pros and cons) is likely here for the long haul.

BLOCKCHAIN

It works with Blocks, whereas the spreadsheet works with "rows" and "columns".

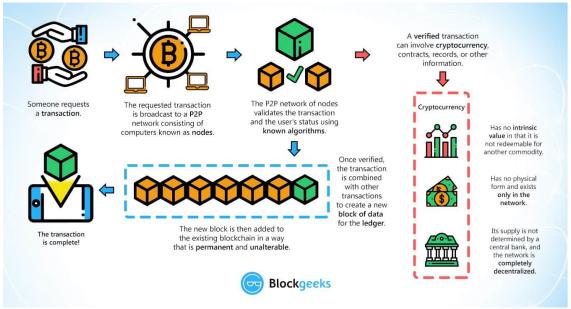
A block in a blockchain is a collection of data. The data is added to the block in the blockchain, by connecting it with other blocks in chronological others creating a chain of blocks linked together. The first block in the Blockchain is called Genesis Block.

Blockchain is a distributed ledger, which simply means that a ledger is spread across the network among all peers in the network, and each peer holds a copy of the complete ledger.

Some key attributes of Blockchain are which proves that blockchain is better than traditional systems of ledger information keeping:

- 1. **Peer-To-Peer:** No central authority to control or manipulate it. All participant talks to each other directly. This allows for data exchange to be made directly with third-parties involvement.
- 2. **Distributed:** The ledger is spread across the whole network which makes tampering not so easy.
- 3. **Cryptographically Secured:** Cryptography is used for the security services to make the ledger tamper-proof.
- 4. **Add-Only:** Data can only be added in the blockchain with time-sequential order. This property implies that once data is added to the blockchain, it is almost impossible to change that data and can be considered practically immutable. We can say it has: "The right to be forgotten or right to erasure" defined here.
- 5. Consensus: This is the most critical attribute of all. This gives blockchain the ability to update the ledger via consensus. This is what gives it the power of decentralization. No central authority is in control of updating the ledger. Instead, any update made to the blockchain is validated against strict criteria defined by the blockchain protocol and added to the blockchain only after a consensus has been reached among all participating peers/nodes on the network.

(A) How Does It Work?



- A node starts a transaction by first creating and then digitally signing it with its private key (created via cryptography). A transaction can represent various actions in a blockchain. Most commonly this is a data structure that represents the transfer of value between users on the blockchain network. Transaction data structure usually consists of some logic of transfer of value, relevant rules, source and destination addresses, and other validation information.
- 2. A transaction is propagated (flooded) by using a flooding protocol, called Gossip protocol, to peers that validate the transaction based on pre-set criteria. Usually, more than one node is required to verify the transaction.
- 3. Once the transaction is validated, it is included in a block, which is then propagated onto the network. At this point, the transaction is considered confirmed.
- 4. The newly-created block now becomes part of the ledger, and the next block links itself cryptographically back to this block. This link is a hash pointer. At this stage, the transaction gets its second confirmation and the block gets its first confirmation.
- 5. Transactions are then reconfirmed every time a new block is created. Usually, six confirmations in a network are required to consider the transaction final.

CRYPTOCURRENCY TODAY

There are many specific cryptocurrencies currently becoming popular and widely-used as currencies, commodities, and electronic payment systems. The most commonly-used cryptocurrency is, by far, bitcoin. However, other cryptocurrencies (like Ripple, Ethereum, lit coin, and more) are growing in both public acceptance and value.

Types of Cryptocurrency



1.Bitcoin (BTC): One of the most commonly known currencies, Bitcoin is considered an original cryptocurrency. It was created in 2009 as an open-source software. The author of the whitepaper that established this digital currency was under the pseudonym Satoshi Nakamoto.

How does Bitcoin work?

Using blockchain technology, Bitcoin allows users to make transparent peer-to-peer transactions. All users can view these transactions; however, they are secured through the algorithm within the blockchain. While everyone can see the transaction, only the owner of that Bitcoin can decrypt it with a "private key" that is given to each owner. Unlike a bank, there is no central authority figure in the Bitcoin. Bitcoin users control the sending and receiving of money, which allows for anonymous transactions to take place throughout the world.

Litecoin (LTC): Litecoin was launched in 2011 as an alternative to Bitcoin. Like other cryptocurrencies, Litecoin is an open source, global payment network that is completely decentralized, meaning there are no central authorities.

What's the difference between Bitcoin and Litecoin?

- Litecoin is believed to feature faster transaction times.
- The coin limit for Bitcoin is 21 million and Litecoin is 84 million.
- They operate on different algorithms, Litecoin's being "scrypt" and Bitcoin's is "SHA-256."

Ethereum (ETH): Created in 2015, Ethereum is a type of cryptocurrency that is an open source platform based on blockchain technology. While tracking ownership of digital currency transactions, Ethereum blockchain also focuses on running the programming code of any decentralized application, allowing it to be used by application developers to pay for transaction fees and services on the Ethereum network.

Ripple (XRP): Ripple was released in 2012 that acts as both a cryptocurrency and a digital payment network for financial transactions. It's a global settlement network that is designed to create a fast, secure and low-cost method of transferring money. Ripple allows for any type of currency to be exchanged, from USD and Bitcoin to gold and EUR and connects to banks, unlike other currencies. Ripple also differs

from other types of digital currencies because its primary focus is not for person-to-person transactions, rather for moving sums of money on a larger scale.

Bitcoin Cash: Bitcoin Cash is a type of digital currency that was created to improve certain features of Bitcoin. Bitcoin Cash increased the size of blocks, allowing more transactions to be processed faster.

Ethereum Classic: Ethereum Classic is a version of the Ethereum blockchain. It runs smart contracts on a similar decentralized platform. Smart contracts are applications that run exactly as programmed without any possibility of downtime, censorship, fraud or third-party interface. Like Ethereum, it provides a value token called "classic ether," which is used to pay users for products or services.

Zcash (ZEC): Zcash is a digital currency that was built on the original Bitcoin code base. Conceived by scientists at MIT, Johns Hopkins and other respected academic and scientific institutions, it was built on a decentralized blockchain. A core feature and differentiation of Zcash is an emphasis on privacy. While not a function available to investors on Equity Trust's platform, users can send and receive Zcash without disclosing the sender, receiver or the amount transacted.

Stellar Lumen (XLM): Stellar lumen is an intermediary currency that facilitates currency exchange. Stellar allows a user to send any currency they own to someone else in a different currency. Jed McCaleb founded the open-source network Stellar and created the network's native currency in 2014.

UNDERSTANDING CRYPTOCURRENCY AN ANALOGY

Imagine a world where, instead of money, we used giant carved stones as our currency. Further, because these stones are so large, we kept them in a public place where everyone could see them and anyone could check who owned which stone.

When you wanted to buy something, you would simply tell everyone that you were transferring ownership of one of your rocks to someone else. Then, everyone would know that you no longer owned that rock, and you couldn't spend it again.

Further, if anyone ever wanted to make a new stone, all they had to do is spend time carving it so that people recognized that is was the same kind of valuable stone as all of the other ones. The time spent carving the stone makes it valuable and worth something to other people in the rock-spending community.

A GENERAL DESCRIPTION OF CRYPTOCURRENCY

Cryptocurrency is a lot like the theoretical rock currency described above:

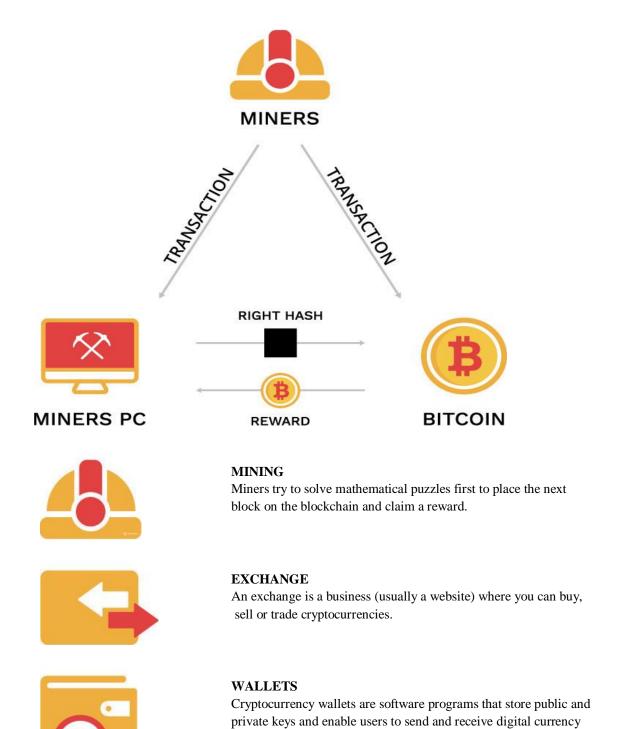
Every cryptocurrency has a public ledger that contains the past and present ownership of each coin.

If you want to make transaction, you simply broadcast to the cryptocurrency's network that you're transferring ownership of some cryptocurrency of yours to someone else.

The network then spends computational power on both verifying your transaction (that you do own the cryptocurrency your spending and that you haven't spent it before), and adding it to the ledger.

In the process, this computational time and effort creates new cryptocurrency as a reward to the community members who helped make the transaction possible.

1.3.7 HOW DOES CRYPTOCURRENCY WORK?



THE CRYPTOCURRENCY BASICS

To understand how cryptocurrency works, you'll need to learn a few basic concepts. Specifically: **Public Ledgers**: All confirmed transactions from the start of a cryptocurrency's creation are stored in a public ledger. The identities of the coin owners are encrypted, and the system uses other cryptographic techniques to ensure the legitimacy of record keeping. The ledger ensures that corresponding "digital wallets" can calculate an accurate spendable balance. Also, new transactions can be checked to ensure that each transaction uses only coins currently owned by the spender. Bitcoin calls this public ledger "transaction block chain"

and monitor their balance.

Transactions: A transfer of funds between two digital wallets is called a transaction. That transaction gets submitted to a public ledger and awaits confirmation. Wallets use an encrypted electronic signature when a transaction is made. The signature is an encrypted piece of data called a cryptographic signature and it provides a mathematical proof that the transaction came from the owner of the wallet. The confirmation process takes a bit of time (ten minutes for bitcoin) while "miners" mine. Mining confirms the transactions and adds them to the public ledger.

Mining: Mining is the process of confirming transaction and adding them to a public ledger. To add a transaction to the ledger, the "miner" must solve an increasingly-complex computational problem (like a mathematical puzzle). Mining is open source so that anyone can confirm the transaction. The first "miner" to solve the puzzle adds a "block" of transactions to the ledger. The way in which transactions, blocks, and the public blockchain ledger work together ensure that no one individual can easily add or change a block at will. Once a block is added to the ledger, all correlating transactions are permanent, and they add a small transaction fee to the miner's wallet (along with newly created coins). The mining process is what gives value to the coins and is known as a proof-of-work system.

THE ANATOMY OF CRYPTOCURRENCY

Although there can be exceptions to the rule, there are some factors (beyond the basics above) that make cryptocurrency so different from the financial systems of the past:

Adaptive Scaling: Adaptive scaling means that cryptocurrencies are built with measures to ensure that they will work well in both large and small scales.

Adaptive Scaling Example: Bitcoin is programmed to allow for one transaction block to be mined approximately every ten minutes. The algorithm adjusts after every 2016 blocks (theoretically, that's every two weeks) to get easier or harder based on how long it took for those 2016 blocks to be mined. So if it only took 13 days for the network to mine 2016 blocks, that means it's too easy to mine, so the difficulty increases. However, if it takes 15 days for the network to mine 2016 blocks, that shows that it's too hard to mind, so the difficulty decreases.

Other measures are included in digital coins to allow for adaptive scaling including limiting the supply over time (to create scarcity) and reducing the reward for mining as more total coins are mined.

Cryptographic: Cryptocurrency uses a system of cryptography (AKA encryption) to control the creation of coins and to verify transactions.

Decentralized: Most currencies in circulation are controlled by a centralized government so their creation can be regulated by a third party. Cryptocurrency's creation and transactions are open source, controlled by code, and rely on "peer-to-peer" networks. There is no single entity that can affect the currency.

Digital: Traditional forms of currency are defined by a physical object (USD existing as paper money and in its early years being backed by gold for example), but cryptocurrency is all digital. Digital coins are stored in digital wallets and transferred digitally to other peoples' digital wallets. No physical object ever exists.

Open Source: Cryptocurrencies are typically open source. That means that developers can create APIs without paying a fee and anyone can use or join the network.

Proof-of-work: Most cryptocurrencies use a proof-of-work system. A proof-of-work scheme uses a hard-to-compute but easy-to-verify computational puzzle to limit exploitation of cryptocurrency mining. Essentially, it's similar to a difficult to solve "captcha" that requires lots of computing power. NOTE: Other systems like proof-of-work (such as proof-of-stake) are also used.

Pseudonymity: Owners of cryptocurrency keep their digital coins in an encrypted digital wallet. A coinholder's identification is stored in an encrypted address that they have control over – it is not attached to a person's identity. The connection between you and your coins is pseudonymous rather than anonymous as ledgers are open to the public (and thus, the ledgers could be used to glean information about groups of individuals in the network).

Value: For something to be an effective currency, it has to have value. The US dollar used to represent actual gold. The gold was scarce and required work to mine and refine, so the scarcity and work gave the gold value. This, in turn, gave the US dollar value.

Cryptocurrency works similarly regarding value. In cryptocurrency, "coins" (which are nothing more than publicly agreed on records of ownership) are generated or produced by "miners." These miners

are people who run programs on specialized hardware made specifically to solve proof-of-work puzzles. The work behind mining coins gives them value, while the scarcity of coins and demand for them causes their value to fluctuate. The idea of work giving value to currency is called a "proof-of-work" system. The other method for validating coins is called proof-of-stake. Value is also created when transactions are added to public ledgers as creating a verified "transaction block" takes work as well. Further, value comes from factors such as utility and supply and demand.

2. LITERATURE REVIEW

- 1. Camoron (2016) claims that it is very unlikely that governments will allow the use of cryptocurrencies in the way that are currently operating. On the contrary claims the author, most of the governments are well positioned to prevent integration of cryptocurrencies within current formal financial institutions. Without these institutions, claims the author, the hurdles cryptocurrencies face to supplanting more legally privileged and centrally issued currencies appear to be insurmountable. In regard of exchange rate issues of cryptocurrencies against traditional currencies such as US Dollar, despite receiving extensive public attention, theoretical understanding is limited regarding the value of blockchain-based cryptocurrencies.
- 2. Vora (2015) claims that cryptocurrencies and variants of virtual currencies are a welcome development, they will offer competition to the existing modalities of money and governmental regulation, they will provide alternative means to economic agents for their transactions, and their innovative existence should be encouraged so that their beneficial features outperform any deleterious ones. Bitcoins are here to stay suggest the above mentioned author, unless considered illegitimate by governments or banned by regulatory actions.
- 3. Singh Aarti and Nidhi Chawla (2016) discuss that future of Ecommerce is difficult to predict but there are various segments that would grow in the future like: emerging new technologies, education, awareness regarding new technology and frauds, Reduced search and transaction cost, Reduced process lead-time and faster time to market, Increased customer service, Improved convenience and shopping experience, Increased information transparency, Knowledge generation, Mittal Alka (2017) focuses on merchants and traders who accept this digital currency as a medium of exchange to overcome its problem of volatility. This will boost the market of Bitcoins not only in India but also in other developing economies. This emphasizes that to survive in the system; Bitcoin has to adapt itself to the required technical and operational innovations. In addition to this, government should impose proper legal framework, to protect the consumers or users of these digital currencies, as the progress seen in the transactions in this currency during the past few months is tremendous.
- 4. Authors: Winston Moore and Jeremy Stephen In this working paper from the Central Bank of Barbados, economists Winston Moore and Jeremy Stephen conclude that holding a small portion of reserve assets in bitcoin could be beneficial to the small island nation. The appropriate portfolio allocation could both improve returns and increase diversity against speculative attacks, without significantly affecting the volatility of the reserve balance. The authors recognize that "digital currency could become a key currency for settling transactions" and that it is necessary for central banks to evaluate their potential impact. This paper is significant because it reveals the emerging worldwide recognition of bitcoin as a useful store of value among central bank authorities.
- 5. Authors: Ethan Heilman, Alison Kendler, Aviv Zohar and Sharon Goldberg. Security researchers have been eager to identify new attack vectors against the bitcoin network since the authors of the "selfish mining" paper garnered praise and publicity in 2013. Presented in August during the 24th USENIX Security Symposium in Washington, DC, authors Heilman, Kendler, Zohar and Goldberg reveal the "eclipse attack", in which the attacker "monopolizes all of the victim's incoming and outgoing connections, thus isolating the victim from the rest of its peers in the network". The attacker can then trick the victim by feeding him misinformation about the state of the ledger, or co-opt the victim's computing power for its own nefarious purposes.
- 6. Author: Gregory Maxwell That there is a strong desire for financial privacy in Bitcoin comes as no surprise, given the community's historically libertarian leanings. Possibly no one has made more of an impact fostering privacy-enhancing techniques than Gregory Maxwell. Following up on his

2013 invention of "conjoin", in this report Maxwell presents his latest cutting-edge research. "Confidential Transactions" is a technique that permits users to hide the values of their payments from the public, yet -- with novel cryptographic methods-- present sufficient information to allow miners to verify that the sum of the coins transacted is preserved. Implementing confidential transactions in bitcoin requires significant protocol changes; however, experimentation is currently being carried out on Block stream side chains.

- 7. Author: Dr. Garrick Hileman & Michel Rauchs This research focused on alternative payment systems and digital assets. Led by Dr. Garrick Hileman, it is the first study of its kind to holistically examine the burgeoning global cryptocurrency industry and its key constituents, which include exchanges, wallets, payments, and mining. The findings are both striking and thought-provoking. First, the user adoption of various cryptocurrencies has really taken off, with billions in market cap and millions of wallets estimated to have been 'active' in 2016. Second, the cryptocurrency industry is both globalized and localized, with borderless exchange operations, as well as geographically clustered mining activities. Third, the industry is becoming more fluid, as the lines between exchanges and wallets are increasingly 'blurred' and a multitude of cryptocurrencies, not just bitcoin, is now supported by a growing ecosystem, fulfilling an array of functions. Fourth, issues of security and regulatory compliance are likely to remain prevalent for years to come
- 8. A Short Introduction to the World of Cryptocurrencies" by Fabiana Schar and Aleksander Berentsen, the bitcoin first came into existence with a white paper that was published in the year 2008 (Berentsen & Schar, 2018). The creators of the model intended to introduce a "cash-less payment model" that would allow electronic transactions instead of the physical cash-based transactions. In order to help understand the readers the concept of the bitcoin, the authors have highlighted the cash transactions as well as the electronic payment system (Abdi, 2014).
- 9. The major difference between the traditional payment model and the electronic payment via bitcoin is that there is no involvement of physical cash in the later system. The bitcoin is a virtual monetary unit that has no physical or tangible representation (Abramaowicz, 2016). In order to effectively use this currency, it is necessary to establish at all times, the total number of monetary units that exist and the number of new monetary units that have been created. Such an approach is highly important to make sure that all the involved participants consent about the ownership rights relating to the digital currency units.
- 10. In the recent times, the cryptocurrency has brought about transformational change in the online payment system and according to Chiu and Koeppl, in the coming years the different kinds of cryptocurrencies will expand at a faster rate. Various kinds of cryptocurrencies have come into existence such as the Litcoin, Zcash, Dash, Ripple, Bitcoin and many more (Ahmad, et al., 2018). But the most successful cryptocurrency that has captured the attention of the tech freaks is the Bitcoin. Appendix 2 highlights the value of one Bitcoin unit in terms of the U.S. dollar. This rising trend shows that the innovative currency has gained high popularity and it will further gain more popularity due to its usefulness and unique value.
- 11. Most of the types of cryptocurrencies are fundamentally built by the professional computer experts and scientists who emphasize on overall feasibility, effectiveness and security aspects of this virtual payment model. Chiu and Koeppl in their research paper have defined the term cryptocurrency as the digital "record-keeping device" that uses the balances for the purpose of keeping track of different responsibilities or obligations from trading and that is openly known to all the traders (Badertscher, et al., 2018). The simplicity of using the Bitcoin cryptocurrency has been presented in Appendix 3.
- 12. Without this new digital payment system, people need to use the money that they have in their bank accounts by taking the help of an intermediary so that they can transfer it to the bank account of another party. But when people use the cryptocurrency system, they just need to enter into the Bitcoin networking system in order to carry out a hassle-free payment transaction (Chan, et al., 2017). The Bitcoin network is fundamentally peer-to-peer network that works on the "decentralized distributed self-clearing ledge" system. The Bitcoins are the virtual currency units that are issues on the basis of a fixed set of rules so that a sound money model can come into existence that cannot be controlled by any central authoritative body or a malicious controller.

13. Bitcoin is the very first decentralized cryptocurrency that has gained tremendous following from various sections of the society including the media, the financial industry and its experts and the academic professionals. According to the published article "A statistical analysis of cryptocurrencies" by Chan and Nadarajah, the global interest in Bitcoin has increased in the past few years (Chan et al., 2017). In the United Kingdom, the government is thinking of paying various research grants by using the online cryptocurrency – Bitcoin. Similarly, various Information Technology-based organizations are accumulating the Bitcoins so that they can effectively defend against harmful ransomware (Darlington III, 2014).

- 14. Even the U.S. Federal Reserve" has expressed its interest in this digital payment model. It is encouraging the central banks in the nation to explore new areas in the financial industry. A number of research studies have been carried out on the Bitcoin cryptocurrency in order to highlight the main advantages of the virtual payment system (Duong, et al., 2016). Schar and Berentsen in their article believe that the optimum potential of the Bitcoin model can be properly understood in the coming years. In the current scenario, the best possible application of this virtual currency model is as an asset.
- 15. In the near future, there is a high possibility that the Bitcoin currency will strengthen as "crypto assets" and develop into a useful investment instrument. Similarly, the strong data integrity model of the Bitcoin technology could encourage the people in the future to gain better knowledge on the cryptocurrency system (Fry & Cheah, 2016). In the current times, the robust data integrity system makes sure that any kind of a manipulation attempt is made apparent to the users. All these key features of the Bitcoin cryptocurrency indicate that the virtual Bitcoin unit has a lot of scope in the current times as well as in the near future.

OBJECTIVES IDENTIFICATION TABLE

Title	Year	Objective	Sample size	Outcome
A study to	2018	To understand the	Primary data	The government needs
understand the		awareness about bitcoins	was collected	to take into
awareness about		among youth. To analyze	using a	consideration that the
bitcoins among the		and understand factors like	structured	citizens are still unaware
youth in India-		age and gender has any	Questionnaire	of the fact and they
Bangalore.		relation to understand and	via google	needs to make sure
		knowledge of bitcoin.	form and	people use digital
			sample size is	payment and then move
			50.	to digital currencies.
Initial coin	2019	Ico token exchange listing	More than	The market for ,Icos
offering-		causes higher future	1500 Icos.	which grew rapidly from
Financing growth		employment, indicating		mid-2017 through mid-
with		that access to token		2018 and emerged as a
cryptocurrency		liquidity has important		vibrant alternative
token sales.		real		channel for start up
		consequences for the		financing.
		enterprises.		
A study on	2018	To understand the investor	114	Currently the acceptance
investors		opinion regarding	respondents.	of crypto payments by
awareness and		government intervention		individual who are
perception		and involvement to		educated and have not
regarding		develop bitcoin as legal		worth 5.10 lacs is
investment in		mode for cash less		modest furthermore,
cryptocurrency		transaction.		some structural parts of
with special				the bitcoin system like
reference to				the blockchain approach
bitcoin.				as append only ledger
				may open interesting

				challenges for future development on secure decentralized system.
Awareness about cryptocurrency in India.	2017	To find what people know and what they think about the cryptocurrency.	68 questionnaires.	After 9 years of inception, bitcoin is still the most preferred cryptocurrency which means that security and widespread acceptance is for important utility and other application of cryptocurrencies and block chain.

Based on the above literature review we identified following objectives:

- To find out awareness about cryptocurrency.
- To find out people preference about cryptocurrency, there trading preference there preferred
 crypto currency, their crypto vocabulary, and what they think as an advantage, disadvantage and important factors about cryptocurrency.
- To study the perception of investors regarding acceptance of bitcoin as mode of cashless transaction.

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